

Appln. No. 10/071,963
Amendment dated September 26, 2003
Reply to Office Action of July 2, 2003

REMARKS/ARGUMENTS

Reconsideration of the present application, as amended, is respectfully requested.

The July 2, 2003 Office Action and the Examiner's comments have been carefully considered. In response, the specification and claims are amended, new claims are added and remarks are set forth below in a sincere effort to place the present application in form for allowance. The amendments are supported by the application as originally filed. Therefore, no new matter is added.

AFFIRMATION OF ELECTION

Applicants hereby affirm the oral election on May 19, 2003 of Group I, claims 1-6, without traverse.

SPECIFICATION

Amendments have been made to the specification in order to correct inadvertent typographical errors of which Applicants have become aware. No new matter is added.

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CLAIM REJECTIONS

In the Office Action, claims 1-6 are rejected under 35 USC 103 as being unpatentable over EP 0 875 374 A2 (Shimizu et al.) in view of USP 6,326,086 (Mori et al.).

The present claimed invention as defined by claim 1 is directed to a decorative sheet which includes a base material layer formed of a colored resin material including an amorphous polyethylene terephthalate type resin as a main component, a print pattern layer formed on one surface of the base material layer consisting of a coloring ink comprising a binder including a copolymer of vinyl chloride and vinyl acetate as a main component, and a transparent layer laminated on the print pattern layer consisting of a resin material including a transparent amorphous polyethylene terephthalate type resin as a main component.

In rejecting claims 1-6, the Examiner contends that Shimizu et al. disclose a completely amorphous polyester type resin and a substrate layer of amorphous polyethylene terephthalate (APET).

The present claimed invention as defined by claim 1 is patentable over Shimizu et al. in that claim 1 recites the binder as one component in the decorative sheet wherein the binder

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includes a copolymer of vinyl chloride and vinyl acetate as a main component.

The binder, which includes a copolymer of vinyl acrylate and vinyl acetate as a main component, affects the laminate strength (adhesive strength of the decorative sheet formed of the laminated layers). In each layer of the laminated layers of the base material layer, transparent layer, and print pattern layer, adequate laminate strength can be obtained. The effects can be exhibited such that unfavorable phenomena, such as separation of each layer, do not occur (see the present application at page 5, line 13 - page 6, line 11). Thus the obtained decorative sheet is suitable for secondary operations, that is, the decorative sheet has the effect of being easily processed into a desired shape when three dimensional processing such as radius processing or curved surface processing (see the present application at page 17, lines 10-19) is performed.

In contrast to the present claimed invention, common binders, acrylic resins and urethane resins cannot give sufficient laminate strength to a decorative sheet. As a result, partial release of the decorative sheet occurs during membrane molding (see the present application at page 22, line 24 - page 24, line 13).

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In the Office Action, the Examiner admits that Shimizu et al. do not teach the ink composition of the pattern layer. In order to bridge the gap between the present claimed invention and Shimizu et al., the Examiner cites Mori et al. as teaching a sheet for molded in foil decoration and a method of using the sheet comprising woodgrain ink of vinyl chloride suitable to apply to an APET film. Mori et al. do not, however, disclose, teach or suggest a binder as one component in the decorative sheet wherein the binder includes a copolymer of vinyl chloride and vinyl acetate as a main component. Therefore, Mori et al. do not close the gap between the present claimed invention as defined by claim 1 and Shimizu et al..

That is, the present claimed invention as defined by claim 1 is patentable over Shimizu et al. and Mori et al., taken either alone or in combination, because the references do not disclose, teach or suggest, inter alia:

a decorative sheet including a base material layer, a print pattern layer formed on one surface of the base material layer, consisting of a coloring ink comprising a binder including a copolymer of vinyl chloride and vinyl acetate as a main component and a transparent layer laminated on the print pattern layer.

In view of the foregoing, claim 1 is patentable over the cited references under 35 USC 102 as well as 35 USC 103.

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Claims 2-5 are either directly or indirectly dependent on claim 1 and further define and limit the invention defined by claim 1. Claims 2-5 are patentable over the cited references in view of their dependence on claim 1 and because the references do not teach each of the limitations set forth in claims 2-5.

NEW CLAIMS

New claims 11 and 12, which are dependent on claim 6, are added to the present application and further define and limit the invention defined by claim 1.

Claim 11 further defines the base material as including a ratio of 60 to 90 percent by weight of an amorphous polyethylene terephthalate type resin and a ratio of 10 to 40 percent by weight of a crystalline polyester resin.

Claim 12 further defines the transparent layer as including a ratio of 60 to 90 percent by weight of an amorphous polyethylene terephthalate type resin and a ratio of 10 to 40 percent by weight of a crystalline polyester resin.

Claims 11 and 12 are patentable over the cited references in view of their dependence on claim 1 and because the cited references do not disclose, teach or suggest the limitations set forth in claims 11 and 12.

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It is respectfully submitted that no additional fees are due for the presentation of claims 11 and 12. However, if any additional fees are due, please charge our Deposit Account No. 06-1378 for such sum.

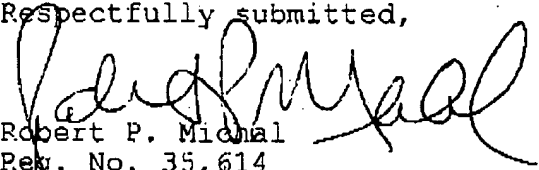
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If the Examiner disagrees with any of the foregoing, the Examiner is respectfully requested to point out where there is support for a contrary view.

Entry of this Amendment, allowance of the claims and the passing of this application to issue are respectfully solicited.

If the Examiner has any comments, questions, objections or recommendations, the Examiner is invited to telephone the undersigned at the telephone number given below for prompt action.

Respectfully submitted,


Robert P. Michal
Reg. No. 35,614

Frishauf, Holtz, Goodman & Chick, P.C.
767 Third Avenue - 25th Floor
New York, New York 10017-2032
Tel. (212) 319-4900
Fax (212) 319-5101
RPM/ms

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